

REMARKS

Claims 1, 6, 9-11, 13-15, 19 and 22-31 were examined by the Office, and in the Office Action of February 17, 2010 all claims are rejected. With this response no claims are amended, added or cancelled. Applicant respectfully requests reconsideration and withdrawal of the rejections in view of the following discussion.

Claim Rejections Under § 103

In section 3, on page 6 of the Office Action, claims 1, 5-8, 10-11, 13-15, 19-20 and 22-31 are rejected under 35 U.S.C. § 103(a) as unpatentable over Chiang et al. (U.S. Patent No. 6,741,863) in view of MacDonald (U.S. Patent No. 5,732,354). Applicant respectfully submits that claim 1 is not disclosed or suggested by the cited references, alone or in combination, because the cited references fail to disclose or suggest all of the limitations recited in claim 1. The cited references at least fail to disclose or suggest measuring at least one feature of a signal transmitted between a mobile station and at least two base stations, as recited in claim 1. For at least this reason, claim 1 is not disclosed or suggested by the cited references.

Chiang is directed to a position locator that enables the detection of an originating location of a 911 caller under various RF propagation positions. The position locator includes a transceiver and a global positioning unit so that even if only one base station receiving the 911 call can be detected the origin of the 911 call can still be located. See Chiang Abstract. In contrast to the disclosure of the present invention, Chiang does not consider line-of-sight conditions, i.e. Chiang does not recognize that line-of-sight conditions may vary, and Chiang requires the use of a roaming transceiver. In contrast to claim 1, Chiang does not disclose or suggest measuring at least one feature of a signal transmitted between a mobile station and at least two base stations, where the two base stations are in a mobile telecommunication system. Instead, Chiang states that one base station is of a telecommunication system and the other device used for location purposes is a mobile position locator which is not part of the telecommunication system of the first base station. It is essential that the mobile position locator of Chiang includes a GPS receiver, which is in contrast to claim 1 in which the base stations of the mobile telecommunication system are fixed and there is no requirement for a GPS receiver to be added. See Chiang column 3, lines 46-50.

In addition, Chiang also fails to mention any problems with varying line-of-sight conditions. Chiang is silent regarding whether measured parameters may be affected by

different line of sight conditions. Therefore, if the problem is not even disclosed, it is generally accepted that any solution to an unknown problem should be considered inventive. Applicant also notes that by having a roving position locator in Chiang, line of sight conditions are not so important.

Furthermore, MacDonald is directed to using received signal strengths to estimate the distance (not location) to a mobile telephone. MacDonald further mentions that signal strength may be affected by propagation path slopes, but propagation path slope is not the equivalent with a characteristic parameter describing excess path lengths. Propagation path slope B is essentially an attenuation parameter dependent on terrain rather than a parameter specifically describing excess path lengths. For example, although the propagation path slope may be affected by obstacles in the environment, the value B is fixed for each antenna, e.g. suburban, urban or downtown. See MacDonald column 7, lines 35-42. In contrast, Figure 1 of the present application clearly shows that the excess path lengths are caused by obstacles between the mobile station and the base station. Therefore, if the mobile station is moved such that there are no obstacles between it and the same base station there may be no excess path lengths. Accordingly, the parameter referred to in claim 1 will vary for the same base station depending on where the mobile station is located in respect to the base station. MacDonald does not describe either a characteristic parameter describing line-of-sight conditions, but instead only discusses general propagation conditions in the area around a particular base station. Therefore, this parameter does not specifically describe excess path lengths.

Even if MacDonald could be integrated into Chiang, it would still not disclose all of the features of claim 1. There is no reason why any teaching of the feature of propagation path loss would be obviously applicable to Chiang because having a roving base station means that the problem of obstacles between the mobile station and roving base station has little importance because the obstacles soon disappear from the line-of-sight. Even if the skilled person were aware of the whole contents of Chiang and MacDonald the skilled person would not know how to dovetail the two teachings together to provide the limitations recited in claim 1. For example, MacDonald teaches that each base station has a fixed propagation path loss factor, but this teaching would be contrary to assigning a fixed propagation path loss factor to a position locator which is designed to always be roving.

In summary there is no reason why one of skill in the art would be aware of any problems, such as the problem of excess path lengths based on the disclosure of Chiang. Even if one skilled in the art was aware of any such problems of fixed base stations, the

skilled person would not see this problem arising because this is overcome by using a roving position locator. Chiang also needs the roving position locator and a GPS so that the coordinates of the roving position locator can be determined. With the fixed base stations of the current claims this is not a problem. In addition, MacDonald does not teach that the parameters describing line-of-sight conditions or excess path lengths for a particular mobile location. Therefore, for at least the reasons discussed above, claim 1 is not disclosed or suggested by the cited references.

Independent claims 15 and 23-24 contain limitations similar to those recited in claim 1, and therefore are not disclosed or suggested by the cited references for at least the reasons discussed above with respect to claim 1.

The dependent claims rejected above, all ultimately depend from the above mentioned independent claims, and therefore are not disclosed or suggested by the cited references at least in view of their dependencies.


In section 4, on page 11 of the Office Action, claim 9 is rejected under 35 U.S.C. § 103(a) as unpatentable over Chiang in view of MacDonald and Hilsenrath et al. (U.S. Patent No. 6,026,304). Claim 9 ultimately depends from independent claim 1, and therefore it not disclosed or suggested at least in view of its dependency.

Conclusion

For at least the foregoing reasons, applicant respectfully submits that the present application is in condition for allowance, and such action is earnestly solicited. The undersigned hereby authorizes the Commissioner to charge Deposit Account No. 23-0442 for any fee deficiency required to submit this response.

Respectfully submitted,

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Keith R. Obert
Attorney for the Applicant
Registration No. 58,051

WARE, FRESSOLA, VAN DER SLUYS
& ADOLPHSON LLP
755 Main Street, P.O. Box 224
Monroe, Connecticut 06468
Telephone: (203) 261-1234
Facsimile: (203) 261-5676